

BOOSTED AIR SOURCE HEAT PUMP

5 ABSTRACT OF THE INVENTION

A heat pump system is presented having a primary compressor, a booster compressor, a multi-step thermostat, an indoor coil, an outdoor coil, a refrigerant flow conduit connecting these elements in a closed loop system, and at least one pressure sensor positioned to always
10 sense the refrigerant system low side pressure, which is commensurate with outdoor ambient air temperature in all heating modes of operation. The pressure sensor functions as an override and safety control to prevent or permit operation of the compressors, and also other system components, depending on outside air temperature. The primary compressor is preferably a multi-capacity compressor. A defrost energy transfer fluid is used in a defrost
15 cycle.